WHAT IS CLAIMED IS:

1. A magnetic reproducing device comprising:

a signal detecting means for detecting a signal from a magnetic recording medium by a coil;

an amplifying means for amplifying the signal detected by said signal detecting means;

a filtering means for filtering the signal amplified by said amplifying means; and

a capacitor connected in parallel to the coil of said signal detecting means;

wherein the actual resonance frequency of a resonance circuit including said coil, said capacitor and a floating capacitance is set to be four to eight times the maximum reproduction frequency.

2. The magnetic reproducing device according to claim 1, wherein said magnetic recording medium is a 3.5-inch micro floppy disk, and the resonance frequency of said resonance circuit including the coil of said detecting means, said capacitor and the floating capacitance is in a range from 1 to 2 MHz, and the maximum reproduction frequency is 250 kHz.

3. The magnetic reproducing device according to claim 1, wherein said magnetic recording medium is a 3.5-inch micro floppy disk, and the resonance frequency of

said resonance circuit including the coil of said detecting means, said capacitor and the floating capacitance is in a range from 2 to 4 MHz, and the maximum reproduction frequency is 500 kHz.

4. The magnetic reproducing device according to claim 1, wherein said magnetic recording medium is a 3.5-inch micro floppy disk, and a control means is further provided for selectively switching the filtering characteristic of said filtering means in response to detection of a magnetic signal from the vicinity of the innermost portion of said 3.5-inch micro floppy disk by said detecting means, or in response to detection of a magnetic signal from the vicinity of the outermost portion of said disk.

5. The magnetic reproducing device according to claim 4, wherein said filtering means is switched to a Chebyshev characteristic filter by said control means when a magnetic signal has been detected from the vicinity of the innermost portion of said 3.5-inch micro floppy disk, and said filtering means is switched to a Butterworth characteristic filter when a magnetic signal has been detected from the vicinity of the outermost portion of said disk.